


<b>Module:</b>	<b>Elective Advanced Lectures: Theoretical Physics</b>
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Module No.: physics70c

<b>Course:</b>		<b>Advanced Topics in Field and String Theory (T)</b>
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Course No.: physics764

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	3+2	7	ST

**Requirements for Participation:**

Prerequisite knowledge of Quantum Field Theory, Superstring Theory, and General Relativity is helpful.

**Preparation:**

Quantum Field Theory (physics755)  
Advanced Theoretical Physics (physics607) / Advanced Quantum Field Theory (physics7501)  
Superstring Theory (physics752)

**Form of Testing and Examination:**

active participation in exercises, oral or written examination

**Length of Course:**

1 semester

**Aims of the Course:**

An introduction into modern topics in Mathematical High Energy Physics in regard to current research areas

**Contents of the Course:**

String and Supergravity Theories in various dimensions  
Dualities in Field Theory and String Theory  
Topological Field Theories and Topological Strings  
Large N dualities and integrability

**Recommended Literature:**

Selected review articles an arXiv.org [hep-th]  
J. Polchinski: String Theory I & II  
S. Weinberg: Quantum Theory of Fields